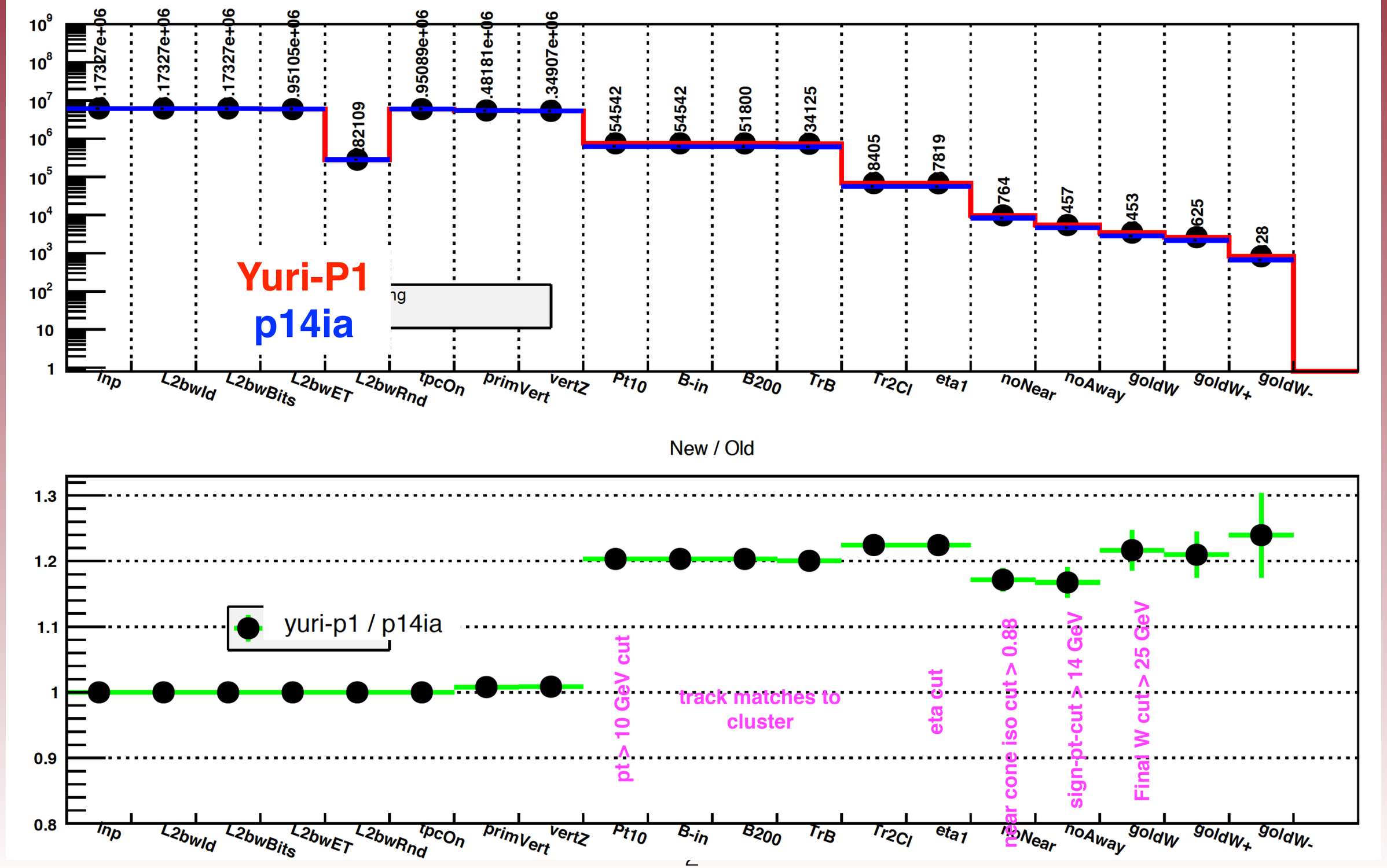
Yuri's-P1 vs P14ia [run 13 - official -P1]

apple- to -apple comparison

To investigate the difference between STI with no HFT material vs Yuri's STICA in run 13 period 1 [<ZDC> ~ 290 kHZ and 50% statistics is below 300 kHz]

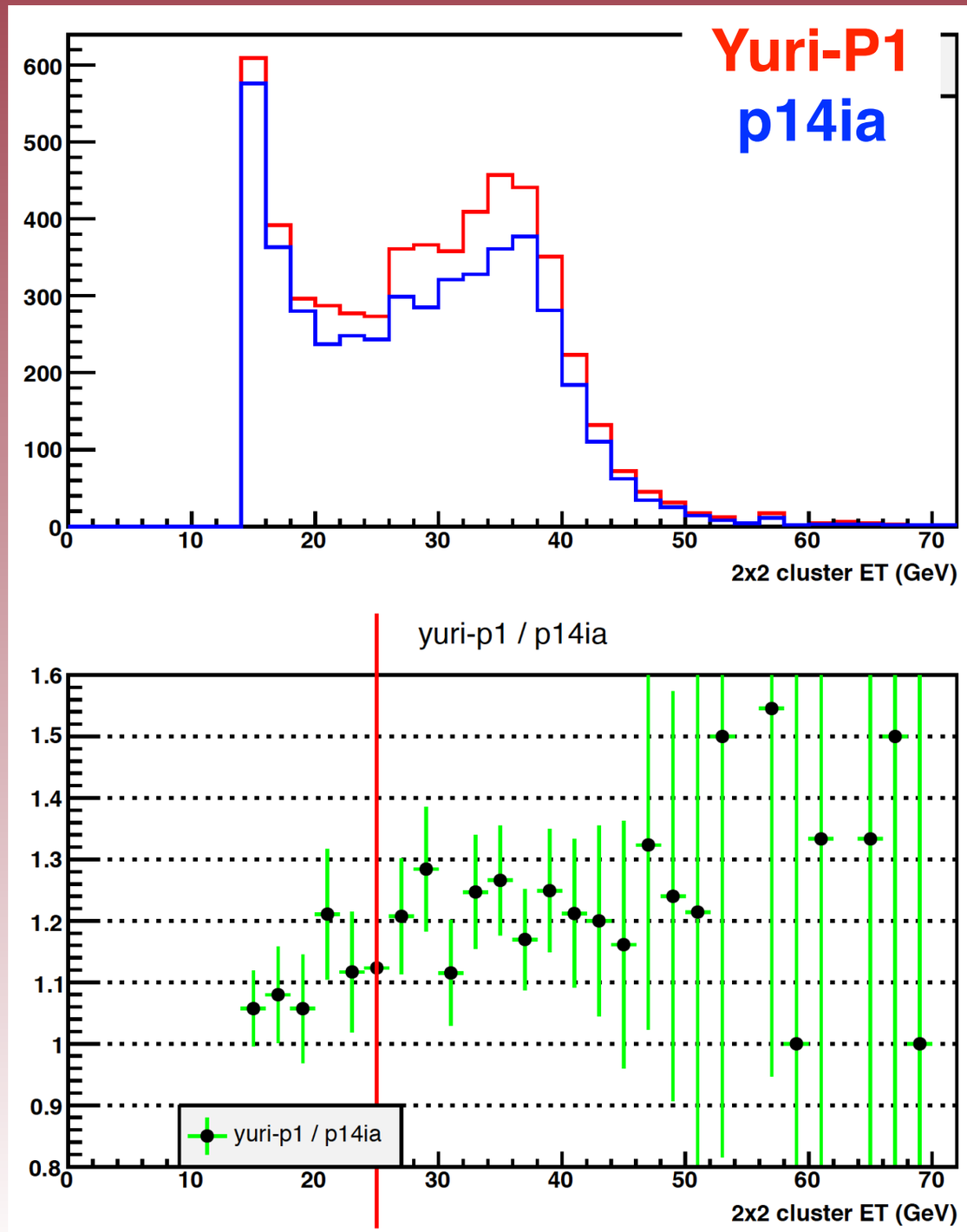
Production	Production Library [also W-code compiled library]	Tracking	vertex finding	BEMC-gains	# of runs used in the comparison	# of events
P14ia [official run 13 - P2 (day 76-126)	SL14a	Sti	PPV_W	run 12 - 200 GeV	585	6172606
Yuri's - P2 (day 76-126)	DEV2/TFG16a	StiCA [Yuri's code]	PPV_W	run 12 200 GeV	585	6172606

Events Counts as a function of W cuts

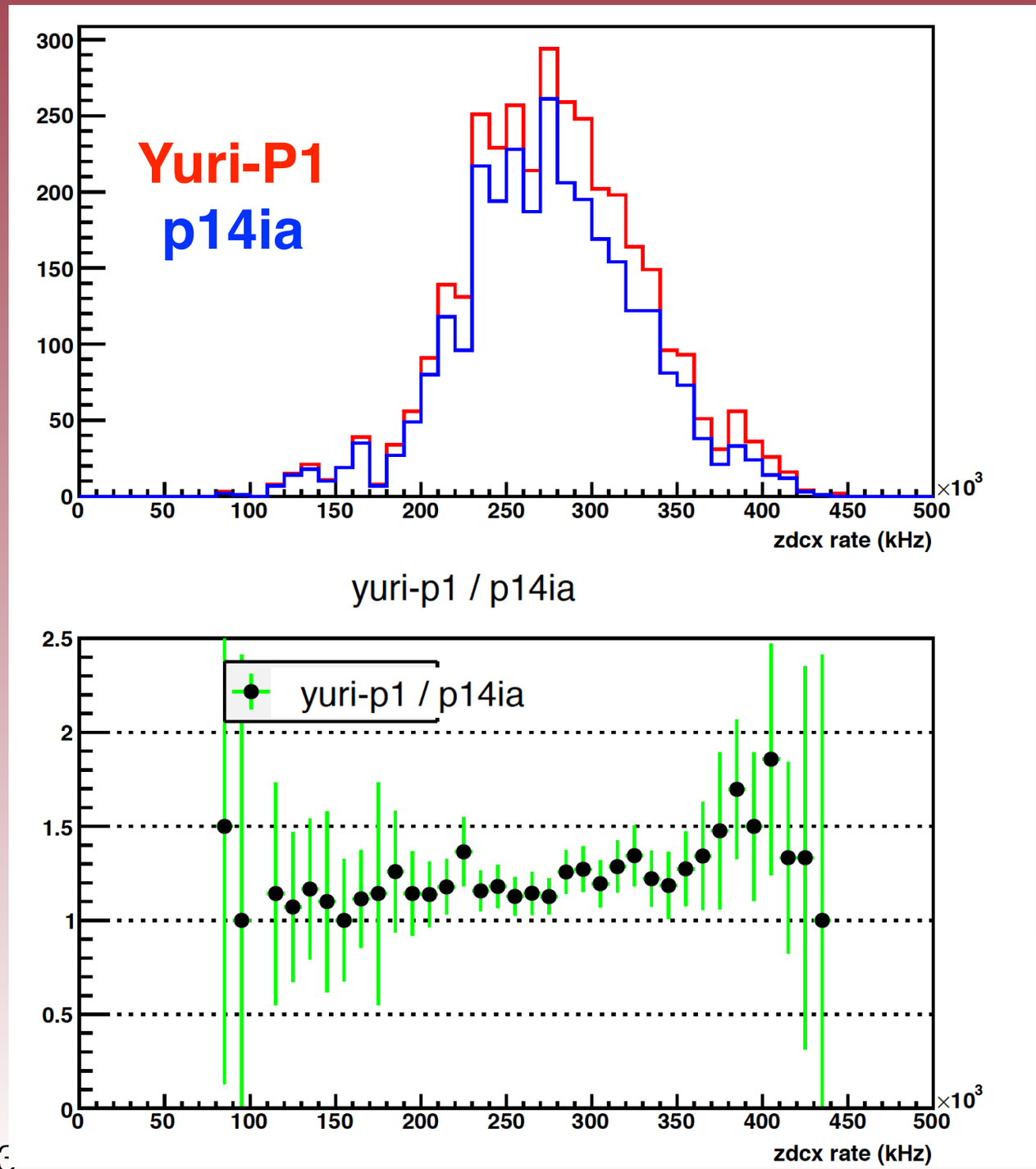


Final W : Et , ZDC

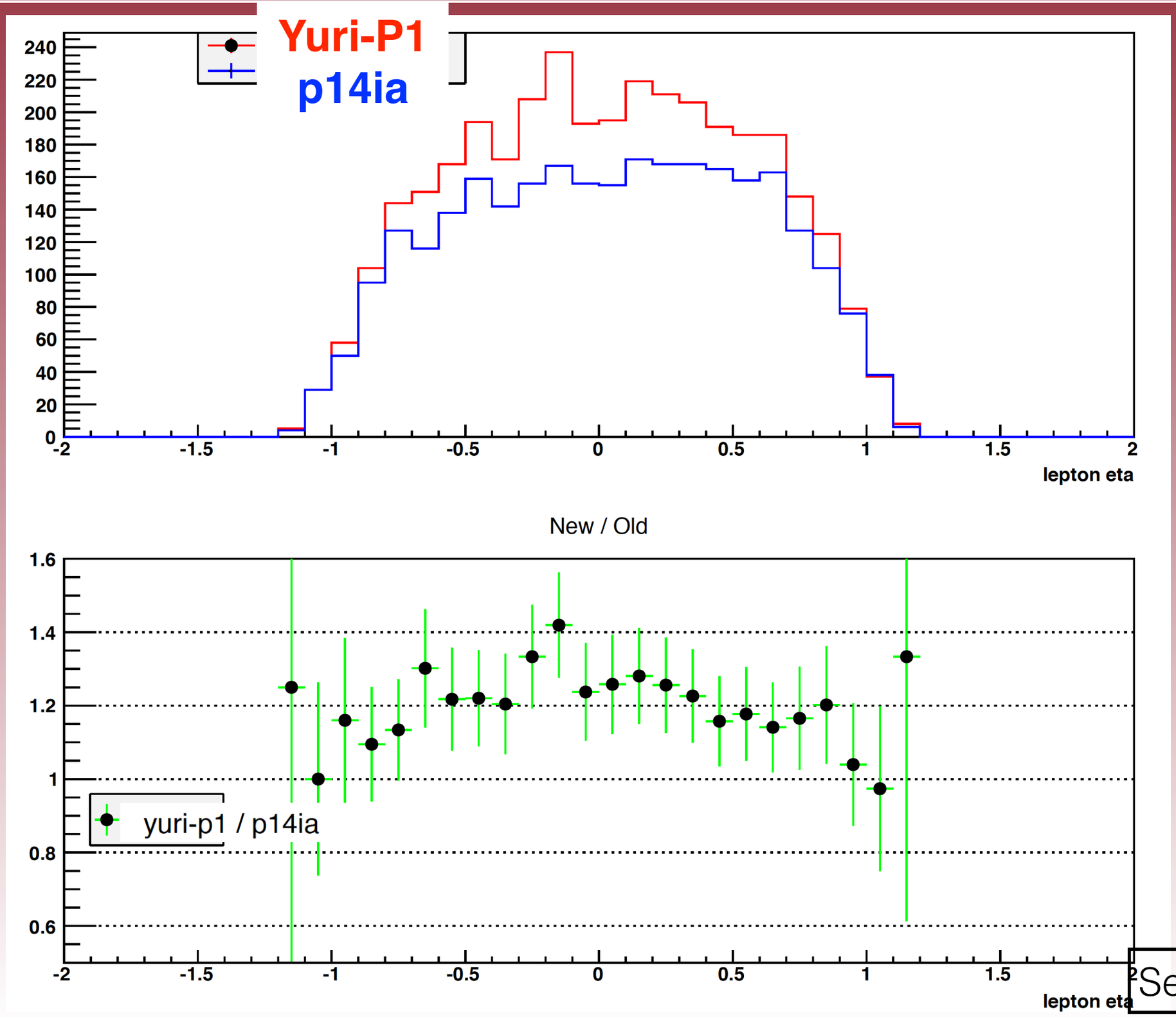
Final W - Et



Final W - ZDC



Final W eta



See Back -up 1

Summary

- ~22 % enhancement in tracks above Pt = 10 GeV and similar enhancement in final W [> 25 GeV] tracks.

- Yuri's production period 1 shows similar results to that of "evals4" which also use "STICA" code on period 1.

- ~18 % change in [evals 1 vs evals 4] + ~ 4% change in [evals 1 vs p14ia] added up to **22% change in Yuri -P1 vs p14ia**. So I would say actual changes to W enhancement in run 13 period 1 from tracking improvement [which include HFT material and STICA] , since official Run 13 production to now is ~ 22% .